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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/680,543	10/04/2000	Gerald J. Reeves	10002281-1	1137

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EXAMINER

PARK, CHAN S

ART UNIT	PAPER NUMBER
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2622

DATE MAILED: 09/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/680,543	<b>Applicant(s)</b> REEVES ET AL.	
	<b>Examiner</b> CHAN S. PARK	<b>Art Unit</b> 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 July 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5 and 9-11 is/are rejected.
- 7) ☒ Claim(s) 4, 8 and 12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)          |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. <u>20050922</u> .                                    |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____.  | 6) <input type="checkbox"/> Other: _____.                                   |

## **DETAILED ACTION**

### ***Response to Amendment***

1. Applicant's amendment was received on 7/5/05, and has been entered and made of record. Currently, **claims 1-12** are pending.

### ***Response to Arguments***

2. Applicant's arguments, see page 6, filed 7/5/05, with respect to Claim Objections have been fully considered and are persuasive. The Objections have been withdrawn.
3. Applicant's arguments, see page 7, filed 7/5/05, with respect to 112 Rejection of the Claims have been fully considered and are persuasive. The Rejections have been withdrawn.
4. Applicant's arguments with respect to claims 1-12 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 5 and 9-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Oda U.S. Patent No. 6,819,359.

5. With respect to claim 1, Oda discloses an image digitizing system (col. 5, lines 14-19 & fig. 1) comprising:

a spatial array of sensors for converting a visual image to signals, each of said sensors providing a respective signal (col. 5, lines 26-41); and

a signal converter for converting said signals into pixel data describing an array of pixels, each of said pixels being associated with a respective one of said sensors, the pixel data associated with most of said pixels being a function of signals provided by the respective sensors (col. 5, lines 30-41), the pixel data associated with at least one of said pixels (defective pixel), wherein for the at least one of said pixels an associated offset value equals an associated gain value, not being a function of a signal from the respective sensor but being a function of one or more signals from neighboring sensors (col. 7, line 55 – col. 8, line 10 & col. 12, lines 35-44).

6. With respect to claim 2, Oda discloses the image digitizing system as recited in Claim 1 wherein multiple pixels are associated with each sensor so that:

for most sensors, all pixels associated with that sensor have values that are functions of the signal provided by that sensor (col. 5, lines 30-41); and

for said least one sensor, all pixels associated therewith have values that are not functions of the signals provided by that sensor but are functions of signals provided by neighboring sensors (col. 12, lines 35-44).

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7. With respect to claim 3, Oda discloses the image digitizing system as recited in claim 2, wherein said signal converter comprises:

an analog-to-digital converter for converting said signals to signal data (col. 12, lines 26-28);

a data processor for converting said signal data to said pixel data (col. 12, lines 29-44); and

memory for storing sensor calibration values (avg. value of surrounding pixels) that said data processor uses in converting said signal data to said pixel data, said sensor calibration values being selected from a set of possible calibration values (col. 8, lines 1-3), most of said possible calibration values determining the function accordingly to which a pixel value is determined from the signal data from the signal from the associated sensor, a first of said possible calibration values indicating that the pixel value for the corresponding pixel is not to be a function of signal data from the associated sensor but a function of the signal data from a neighboring sensor (col. 12, lines 35-44).

8. With respect to claim 5, Oda teaches the image digitizing method comprising:

calibrating an array of sensors so as to distinguish "good" and "bad" sensors (col. 7, line 55 – col. 8, line 10);

using said array of sensors to convert a visual image to signals (col. 5, lines 30-41); and

converting said signals to image data including pixel values associated with an array of pixels, each pixel corresponding to a respective one of said sensors, pixel values associated with a good sensor being a function of the signal provided by that good sensor (col. 5, lines 30-41), pixel values associated with a bad sensor, for which an associated offset value equals an associated gain value (defective pixel), not being a function of the signal provided by that bad sensor but being a function of at least one signal provided by a neighboring good sensor (col. 12, lines 35-44).

9. With respect to claim 9, Oda teaches the image-digitization method comprising the steps of:

using an array of sensors to generate a series of signals (col. 5, lines 30-41); and  
converting said signals into pixel data describing an array of pixels, each of said pixels being associated with a respective one of said sensors, the pixel data associated with most of said pixels being a function of signals provided by the respective sensors (col. 5, lines 30-41), the pixel data associated with at least one of said pixels (defective pixel), wherein for the at least one of said pixels an associated offset value equals an associated gain value, not being a function of a signal from the respective sensor but being a function of a signal from a neighboring sensor (col. 12, lines 35-44).

10. With respect to claim 10, Oda teaches the method as recited in claim 9, wherein plural pixels are associated with each of said sensors so that for said at least one of said sensors none of the pixels associated therewith are described by pixel data that is a function of a signal with that sensor (col. 12, lines 35-44).

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11. With respect to claim 11, Oda teaches the method as recited in claim 11, wherein said converting step involves:

converting said signals into digital signal data (col. 12, lines 26-28); and

converting said digital signal data into said pixel data using sensor calibration values (avg. value of surrounding pixels) associated with respective ones of said sensors, said sensor calibration values being selected from a range of possible calibration values (col. 8, lines 1-3), at least one of said possible calibration values indicating a sensor for which the corresponding pixel data is determined not as a function of its signal but as a function of the signal of a neighboring sensor (col. 12, lines 35-44).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oda as applied to claim 5 above, and further in view of Vicent U.S. Patent No.

5,436,659.

12. With respect to claim 6, Oda teaches the method of claim 5, wherein said image data describes a series of lines, each of said lines including a series of said pixels (col. 6, lines 54-59), all pixels associated with said bad sensor having values determined not

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as a function of a signal provided by said bad pixel but as a function of said neighboring good sensor (col. 12, lines 35-44).

Oda, however, does not teach if the lines are raster lines.

Vicent, the same field of endeavor of the defective pixel correction/calibration, teaches the method of representing the read image signals (by a CCD image source) in a series of raster lines (col. 9, lines 9-15).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to combine the rasterization method of Vicent with the defective pixel correction of Oda.

The suggestion/motivation for doing so would have been to represent the each pixel lines as the raster lines.

Therefore, it would have been obvious to combine Oda with Vicent to obtain the invention as specified in claim 6.

13. With respect to claim 7, Oda teaches the method wherein said converting step involves:

converting said signals into digital signal data (col. 12, lines 26-28); and

converting said digital signal data into said image data using sensor calibration values (avg. value of surrounding pixels) associated with respective ones of said sensors, said sensor calibration values being selected from a range of possible calibration values (col. 8, lines 1-3), said bad sensor being associated with a possible sensor calibration value that indicates that the corresponding pixel data is determined



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not as a function of its signal but as a function of the signal of a neighboring sensor (col. 12, lines 35-44).

### ***Allowable Subject Matter***

14. Claims 4, 8 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHAN S. PARK whose telephone number is (571) 272-7409. The examiner can normally be reached on M-F 8am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Coles can be reached on (571) 272-7402. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chan S. Park  
Examiner  
Art Unit 2622

csp  
September 22, 2005

  
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